

AMERICAN VETERINARY REVIEW,

MARCH, 1890.

EDITORIAL.

VETERINARY JOURNALISM.—President W. L. Williams' paper read before the Illinois State Veterinary Medical Association—his suggestions and our thanks—papers that have lived—they are doing their best—the REVIEW among them—our object and our motto—one for all—review of our efforts—the offers we made several times—they are evidences of our enthusiasm—recommendations of Dr. Williams—assist, not pecuniarily—but by actions—by writings—our proposal to the Veterinary Societies of North America—its acceptance will mean better journals and permanent records to those who will stand by it. **ARMY VETERINARIANS.**—Dr. J. A. Waugh, V.S.—letter and remarks. **A NEW VETERINARY SOCIETY IN NEW YORK STATE.** **A NEW VETERINARY PAPER IN ITALY.**

VETERINARY JOURNALISM.—We print in our present issue a paper from the pen of Dr. W. L. Williams, the worthy President of the Illinois State Veterinary Medical Association, which we strongly commend to the attention of our readers. It was read at a recent meeting of the Association, and many of his suggestions are, in our estimation, of peculiar value as relating to the subject of veterinary journalism in the United States. We gladly improve this opportunity to thank him for his appreciation of our services in this field, and for his very kind criticism of the work hitherto accomplished by the REVIEW. It is not our purpose in taking a retrospective view of the results of the labor which has been expended within the literary departments of our profession, to comment largely upon the number or the character of the publications which have from time to time passed from the hazards of delivery, within a period all too brief, to the throes of dissolution, nor to study too critically the constitutional

characteristics and aptitude for longevity of those which still maintain their existence. But we feel constrained to utter a word of animadversion upon the great lack of enthusiasm, indeed, of mere interest, not only in respect to the REVIEW, but to all our veterinary publications, among the membership of the profession. Let us first, and once for all, repeat the assurance that the publication of the REVIEW has *never*, at any time, been maintained with the object or expectation of making it a pecuniary success. Veterinary progress, the elevation of the profession, the benefit of its entire membership, and a true fraternization of individuals in our guild—these have been our objects, and their promotion our inspiration. The REVIEW has always striven to be *one for all*, but have the all been at the same time one with the REVIEW, is a question which may find an answer in Dr. Williams' papers.

Since the publication of its first number, the REVIEW has never missed its regular monthly issue, while every volume has been studiously improved to the extent of our resources and ability, without consideration of added labor, trouble or expense, and we have aimed to surround ourselves with some of the brightest lights of the profession, in order that our growth in years might be accompanied by a corresponding improvement in the scope of our aims and the realization of our aspirations. Then, when we had made sure of having achieved the necessary and desirable conditions, we lost no time in reducing our subscription price, as well as offering in addition, what some have called *generous* prizes, in order to stimulate the ambition of the writers and investigators of our guild. What have we not done, as occasions have arisen, in the line of advance and improvement? If this is not enthusiasm—and enthusiasm unrewarded and unappreciated, what can it be called? Truly, Dr. Williams is right. The REVIEW is and has always been strictly and essentially a veterinary journal. It has made its own way, and without fear of being taxed with lack of modesty, may claim to have made its mark. If it has encountered enemies, it has also made numerous friends, and still the point of perfection has not yet been attained, and although it has

held its own to the present time, and maintained its assigned position without visible signs of retrogression, it does not propose to be satisfied with only this, while still claiming by virtue of its birth in the United States Veterinary Medical Association, to be the authorized and qualified organ of the veterinary profession in America. But the REVIEW, in order to accomplish this, must accumulate more of her original enthusiasm referred to, and must follow and illustrate with more diligence than ever, her motto of "*Progress.*"

Again, as Dr. Williams urges upon our brethren, our magazine must not appeal in vain for higher and better co-operation; *not* pecuniary assistance, but literary support and contributions from the pens of trained writers. To you, our sympathizing colleagues; to you, our brethren in the profession, we still proffer the use of our columns, and ask you to communicate whatever you may encounter of professional novelty and scientific and practical interest; your original researches and discoveries, with reports of specially interesting cases which you may meet in practice. If with all this, the various societies through the country will favorably consider the urgent request we are about to make, we have little doubt that the REVIEW will in a short time be obliged to double the number of its pages, and enlarge its circulation to an uncomputable figure.

OUR OFFER TO ALL VETERINARY SOCIETIES OF NORTH AMERICA.—The REVIEW has been from time to time furnished by your Secretaries with the current minutes and reports of your meetings. In some instances, these records have been accompanied by copies of the papers presented, read and discussed at the meetings, but too often we are obliged to be content with a mere concise statement or memorandum of the numbers present, with a minute of the business transacted and the officers elected, and an appreciative report of the supper and of the adjournment. It is not in this way a scientific society can accomplish the greatest amount of good. If its objects are the increase of knowledge, the diffusion of information, and the elevation of our profession, how, under these, circumstances can the realization of these objects be

reasonably expected? Now, having in view the welfare of each one of your members, and in behalf of all of you as individual societies, for the benefit of the profession at large, and no doubt for that also of your veterinary organ, the REVIEW, you are asked to consider this request: Let every society, whether its meetings are held monthly, semi-annually or annually, send to our editorial office *all* the papers read at their meetings, with a concise statement of their proceedings, and *all* the matter in its entirety will be given a place in our pages, and we will in return, forward such a number of copies of each extra reprint, as may be indicated by the corresponding officers, to be kept or distributed as their own transactions. If this offer is accepted, who will be able to estimate the augmented value of the REVIEW *of the future!*

ARMY VETERINARIANS.—We have not been keeping the ball rolling in vain, and the subject of army veterinarians is now receiving at all hands the professional attention to which it is entitled. The following paper, prepared by Dr. J. A. Waugh to assist the military committee of the United States Veterinary Medical Association and show the actual personnel of our present United States veterinary service, has been received, and is of interest.

A LIST OF MEN EMPLOYED AS VETERINARY SURGEONS IN THE U. S. ARMY.
COMPILED BY JAMES A. WAUGH, V.S.

Name.	Date of Graduation.	Name of Col. or Sch.	Date of App't as V.S., U.S.A.	Name of Cav. Reg.	Rank.
M. A. Piche, V.S.	Nov. 22, '86.	Mont. V. Sch.	Jan. 6, '87.	1st Cav.	Reg. V.S.*
John Robertson, V.S.	Mch. 28, '88.	" V. Col.	Nov. 1, '88.	2d "	" "
Wm. J. Waugh, V.S.	Mch. 31, '82.	Ont. V. Col.	Aug. 23, '84.	3d "	" "
Henry Hanning, V.S.	Mch. 16, '88.	N. Y. C. V. S.	June 18, '89.	4th "	" "
G. E. Griffin, D.V.S.	Mch. 4, '89.	Am. V. Col.	Sept. 17, '89.	5th "	" "
J. A. Waugh, V.S.	Mch. 31, '82.	Ont. V. Col.	Nov. 20, '82.	6th "	" "
D. Lemay, V.S.	Mch. 29, '79.	Mont. V. Col.	Aug. 20, '89.	7th "	Sen. V.S.†
Vacancy.	—	—	—	7th "	Jun. V.S.†
R. B. Corcoran, Esq.	Non. Grad.	—	Jan. 6, '86.	8th "	Sen. V.S.†
M. J. Treacy, M.R.C.V.S.	Dec. '74.	R. C. V.S. E.	Jan. 7, '89.	8th "	Jun. V.S.†
J. Tompany, Esq.	Non. Grad.	None.	Mch. 14, '79.	9th "	Sen. V.S.*†
A. Macdonald, V.S.	Mch. 31, '82.	Ont. V. Col.	Nov. 24, '84.	9th "	Jun. V.S.
S. W. Service, Esq.	Non. Grad.	—	July 4, '71.	10th "	Sen. V.S.*†
F. Foster, M.R.C.V.S.	Apr. 28, '81.	Glasgow V.C.	June 12, '88.	10th "	Jun. V.S.

* Graduate of "Montreal French Veterinary School," Jan. 17, 1887. This second diploma is an honorary one.

† Appointed Veterinary Surgeon First United States Cavalry, June 1, 1886,

resigned Nov. 1, 1886. Appointed United States "Infantry and Cavalry," School Instructor Hippology, Nov. 1, 1886; resigned Aug. 6, 1889.

‡ An ex-army veterinary surgeon is a strong condidate to fill this vacancy.

§ Appointed Veterinary Surgeon First United States Cavalry, 1877; resigned 1880; reappointed January, 1881; resigned January, 1886; literary graduate of St. Patrick's University, Carlow, Ireland. Never was a student in any veterinary or medical institution.

*† Fellow Royal and Highland Agricultural Society, April, 1874. Appointed Junior Veterinary Surgeon, Seventh United States Cavalry, April, 1883; resigned September, 1887.

*‡ Cavalry soldier, 1858 to 1863; cavalry soldier, 1867 to 1872. Appointed Junior Veterinary Surgeon Seventh United States Cavalry, March 19, 1872; resigned October, 1875. Never was a student in any veterinary or medical institution.

*|| Notary public, general repairer and dealer in all kinds of jewelry. Never was a student in any veterinary or medical institution.

INCIDENTAL REMARKS.—Those appointments are made by the Honorable Secretary of War, upon recommendation of regimental commanders. The First, Second, Third, Fourth, Fifth and Sixth Regiments are each legally entitled to one veterinary surgeon, who receives a salary of seventy five-dollars per month, while the Seventh, Eighth, Ninth and Tenth Regiments are each legally entitled to two veterinary surgeons, one senior veterinary surgeon, who receives a salary of one hundred dollars per month, and one junior veterinary surgeon, who receives a salary of seventy-five dollars per month. They receive free quarters, light, fuel, medicines, instruments and generally a good saddle horse and all necessary horse equipments. Free medical attendance when sick. They receive first class transportation with Pullman palace car or state room tickets, hotel, restaurant and omnibus expenses while traveling or absent on detached service away from any military post. The actual cost of living is very cheap, as the commissary department furnishes a great variety of excellent groceries, meats, vegetables, tobacco and other articles at prices which can not be duplicated at any retail establishment in any part of our country. Milk and meats are very cheap, and there are no personal taxes. They are entitled to one month's leave of absence on full pay for each year spent in military service, not to exceed six months leave of absence at any one time. It seems strange that non-graduates have not embraced this advantage or opportunity to attend some good veterinary college or school while drawing full pay, and finally graduate and become members of a scientific profession. It seems remarkably strange that non-professional men are employed in professional capacities, and even draw larger salaries than well educated and competent men employed in like capacity in the same branch of the military service.

A NEW VETERINARY SOCIETY.—New York has a new Veterinary Association, a number of the veterinarians of the Northern part of the State having met—we have not yet ascertained where—(in January), and formed an organization under the name of the New York State Veterinary Medical

Society. We have only as yet received notice of this organization through a newspaper slip, and we can therefore say but little as to the newly born society. But if our memory is not at fault, there is already another body in existence bearing the same title. If we are not in error, have we not here a new illustration of the charming and salubrious harmony which has made veterinary medicine in the Empire State a proverb and a synonym for agreement and fraternity? And is not this fine fellow-feeling in some slight danger, under the circumstances, of encountering a slight jar or two? The veterinarians of New York will of course be pleased to hear of the advent of a new society, and in the meantime, we bid it welcome, and hope that its labors will greatly conduce to the advantage of all concerned.

A NEW ITALIAN PAPER.—Under the name of "Il Moderno Zooiatria," Professor Salvatore Baldassare, of Turin, Italy, has started a new review of veterinary medicine and zootechny, with Professors Bassi, Brusasco, Longo and Vernita as assistant editors.

ORIGINAL ARTICLES.

ADDRESS

Read before the Illinois State Veterinary Medical Association,
By President W. L. WILLIAMS.

GENTLEMEN.—The Illinois State Veterinary Medical Association begins its seventh annual session under very favorable conditions. Our increase in membership has not been marked by great accessions during the past year, but our organization has been greatly solidified and its working power increased.

Instead of the usual two meetings during the past year, we have had three, and these were all above the average of preceding meetings in attendance and interest, so that we may safely say that it has been the best and most profitable year in our history, and with the present harmonious and effectual organization, there is no reason why each succeeding meeting

should not be better than that preceding it. The harmony existing between the various officers and between the officers and members, has been unusually complete, no jar or discord of any kind worthy of mention having occurred. Probably the most noticeable defect in the internal workings of our Association is the disinclination of a large number of members to take an active part in our meetings by preparing and reading papers or essays. This tendency is to be deplored, and it is to be sincerely hoped will be successfully overcome, since in this way the Association is denied the benefit of such members' experience and thought, while they deny themselves the advantage to be gained by classifying and putting into shape their thoughts, and having them tested and criticised by their professional brethren. Such neglect may also permit some dreamers to fancy that certain members monopolize to too great an extent the time of the meeting by appearing too often on programme, when, in fact, the remedy lies within themselves, and all they need do to correct it is to prepare papers for the meetings. A programme we must have, or our meeting fails, and if one will not, the other must do the work.

For the first time in the history of our Association, it is my painful duty to announce that death has claimed one of our Association; one who, had circumstances permitted, would have proven himself a very useful and companionable member. James Brodie graduated from the Montreal Veterinary College in 1883 at the head of his class, and immediately after entered into active practice in the firm of Williams & Brodie, at Bloomington, and became a member of this Association in the fall of 1883, at its second meeting. Having received an inviting Government appointment in the Hawaiian Islands, he left Illinois, withdrawing from our Association, of which he was then Treasurer, in the fall of 1884. He remained in the Islands until failing health compelled him to resign his position in the fall of 1887, when he came to California, and after a few fruitless months to Colorado Springs, and later to Canon City, Colorado, where he finally succumbed to tuberculosis on the 17th of September last, aged

thirty-two. His withdrawal from our Association was intended to be temporary only, and had he retained his health, would doubtless have been with us now. He was an earnest and skillful veterinarian, a pleasant, genial, upright Christian gentleman, whom it was only necessary to know to admire. He leaves a wife and three children, and I would suggest that you pass suitable resolutions of condolence and sympathy with them in their bereavement.

Our profession in Illinois has lost one member, Mr. Walton, V.S., of Warren, who was accidentally killed last March. He was a graduate, I believe, of the Chicago Veterinary College. Legally, our profession in Illinois remains the same as at our last annual meeting, unrecognized and unknown to the laws of our State. We made an unsuccessful effort last spring, as you are aware, to secure the passage of an act to regulate veterinary practice. You are all presumably acquainted with the leading features of the bill, which, if passed, would, we believe, materially benefit the profession. The failure was due partly to the lateness of introduction, largely to the fatal hostility existing in the last Legislature to State boards, and largely to defections in our own ranks, even in our own Association.

It seems quite strange that members, when specially asked to attend our meetings and discuss legislative matters, should fail to do so, and then without having intimated their wishes to the Association, set up their individual opinion against that of our entire body and bitterly oppose our work, which they might have modified to suit their views had they expressed them at the proper time. Most of the opposition to the proposed bill seems to be due to a misunderstanding of the fundamental design of such laws, and confuse their own selfish motives with the public good. The primary object of veterinary medical legislation should not be the personal benefit of the veterinarians and the hanging of charlatans, but should be designed for the good of the general public, and the up-building of a useful learned profession, and then, should the members prove themselves worthy of their trust, indirect benefits would come in due season and measure. We cannot

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expect a law that will arbitrarily throttle non-graduates and give graduates a monopoly of veterinary patronage. The true source of monopoly is by proving our decided superiority over non-educated men, and the inability to show this superiority is possibly what causes some graduates to clamor for a law which will give them a legal monopoly over non-graduates, against whom they have striven without victory. It is to be hoped that we will continue our efforts until we succeed in getting a reasonably good law, and there is no reason why we should not succeed soon if all work harmoniously. But with or without a law, how are we to attain the position in our respective communities which each desires?

In the first place, the veterinary surgeon needs to be a gentleman in all that the term implies, and by strict morality, sobriety and attention to business, refute the old idea that he may be anything *except* a gentleman. The veterinarian should be an earnest and conscientious student, carefully improving his limitless opportunities for clinical and post mortem study. He should also not only attend, but take an active part in our Association, submitting his own thoughts for the benefit of others, and freely asking advice from the Association on matters which may seem puzzling to him. The study of standard veterinary works should be kept up diligently, and possibly it is, but judging from investigations regarding the study of current veterinary literature as found in our veterinary journals, some grave apprehensions must be felt. Veterinary journals form the medium for the dissemination of current veterinary thought, and it would seem that each thinking veterinarian would be a subscriber to some such journal, but it seems safe to hazard the opinion that less than twenty per cent. of the veterinarians of Illinois are subscribers to veterinary literature.

Recent inquiries, with other objects in view, revealed the fact that out of more than one hundred regularly educated veterinarians in Illinois, only ten of them were subscribers to the only pretended exclusively veterinary journal in America, and to add to the surprise and pain, it was found that an

equal number of non-graduates were also subscribers, thus forcing a very uncomplimentary comparison, and suggesting the query: Is it because the graduates rely, in a self-conceited way, too much on their college education, and think they have learned all they need to know, or are they simply indifferent about knowing anything at all, so long as their diploma is a guarantee of legal right to practice?

There seems to be little doubt that what has been said of this one journal is equally true of all others, and I wish each of you to ask in your own minds if such treatment of yourselves and the veterinary journals is not shameful and without excuse. This brings me to another subject of great interest, the founding of a new veterinary journal, which was recently brought up at a meeting of the Iowa Veterinary Association, and brought to my notice by the following letter from one of the members, from which I quote:

"I feel that I would like to attend [your meeting], as I am desirous of having the subject of a good monthly veterinary journal brought up for discussion. I believe that the members of the profession are in need of such a journal, and I believe that there is enough talent and means among the members to produce and sustain a paper that shall be equalled by few and surpassed by none. I do not think that the AMERICAN VETERINARY REVIEW or the *Journal of Comparative Veterinary Medicine* meets the demands of the profession. They do not have that devotion and enthusiasm in veterinary medicine and surgery that such papers should have, nor do they dwell entirely upon subjects that are of interest to the profession generally."

Too much truth is unfortunately embodied in the foregoing letter regarding the general character of our veterinary journals, but as to not dwelling entirely upon veterinary subjects, the *Journal of Comparative Medicine and Surgery* makes no such claim, although offering much of interest and value, and well worth its price to veterinarians, but the AMERICAN VETERINARY REVIEW plainly insists upon its purely veterinary character, and though a careful reader of its pages for several years, I cannot recall any matter which has appeared

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in it not purely veterinary in character and of general interest to the profession. As to its "enthusiasm and devotion," I would say that the veterinarians of Illinois pay annually on an average, about thirty to forty cents *per capita* towards the support of the REVIEW. About how much enthusiasm and devotion would you expect at such figures?

If the veterinarians of the Western States wish to found a new veterinary journal better than we now have, or as good, or even making any near approach to those we now have, they may place my name on their subscription list, and if desired on the contributors' list also, but this shall not abridge my loyalty or support to the old ones. But ere we launch a new journal, let us ascertain if possible the causes of the shortcomings of the old ones, and if these same causes might not cripple the new one. What are the essentials to a successful journal? I should say abundant, meritorious contributions, a long subscription list and a live editor. A successful and satisfactory veterinary journal cannot be made without sufficient meritorious contributions. The editor can write a few original articles and a few editorials, but were he equal to the task of filling the journal, there would be too much sameness and narrowness to constitute a readable veterinary journal. What have we and those veterinarians who are clamoring for a new journal done towards furnishing contributions to the existing journals? In the past volume of the REVIEW I find one original article from Iowa, and so far in the current volume I find none. In the same time I find four original articles from the pen of one member of our Association and one from another. I remember no contributions in the *Journal of Comparative Medicine and Surgery* from either Illinois or Iowa. Would such contributions and subscriptions awaken the needed devotion and enthusiasm in the new journal? Then the journal must find a wide-awake editor, with sufficient leisure to properly conduct it. Some of you well remember the recently deceased *United States Veterinary Journal*, of Chicago, born without an editor—at least without a veterinarian as editor—starting out with liberal contributions to its columns, and presumably a fair subscription list, which

slowly dwindled away, until, when it died, neither interment nor cremation was necessary. Now let me suggest that ere we launch a new journal, we try some experiments on one of the old ones, say the REVIEW. Suppose that ten of us agree to each prepare and read before our Association two good papers, each equal to five pages of the REVIEW, and when we have used them here, send them to the editor for insertion there, and then suppose that the Associations of Iowa, Indiana, Ohio and other States follow our example, what would be the result? Surely it would be a great boon to our meetings, but what a change such contributions would make in the REVIEW! The present cover would be too small, and it would require at least doubling in size to accommodate the material, and then we would have each year two volumes instead of one as now. And then suppose we quadruple our subscriptions, what would become of the editor? Might he not grow more devoted and enthusiastic under such conditions? Let us first carefully consider if it is not our own fault that our veterinary journals fall short of the desired standard, before we attempt to build a new journal on the infirmities of the old. I trust that some permanent good will come of this agitation, and that the members of our profession shall become more general readers of and contributors to current veterinary literature.

Another matter of importance to us is suggested by a letter to me from Mr. Knowles, V. S., President of the Indiana Veterinary Association, inviting our members to attend their next meeting, occurring at Terre Haute in June next. It seems to me that the interchange of these courtesies, and the more general acquaintance of the veterinarians of neighboring States, would prove mutually beneficial, and I trust you will take such action upon this letter of invitation and support it by so liberal an attendance at their meeting as to assure them of our hearty good will and fraternity.

There are some lesser matters, directly affecting the working of our Association, to which I wish briefly to draw your attention. Our Treasurer and Corresponding Secretary are

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both empowered to receive moneys in such a way as to occasionally lead to errors and complications in spite of the efforts of the careful men you have always selected to fill those positions. Each must be duly informed of the actions of the other, making comparatively double work in properly caring for the funds of the Association. As a remedy, I would suggest that the two offices be merged into one. I desire also to suggest a change in By-Laws, Article I, by changing the election of officers so that it will occur near the close of the annual meeting, instead of at the beginning as now. My reasons for this are, that under the present rule the newly elected officers are abruptly ushered into their positions, without previous thought or preparation, and are at once charged with the work started by their predecessors and which should have been completed by them. The programme for our annual meetings is necessarily made by the retiring administration, and it should be allowed to carry it out. The reports of the officers of the Association are necessarily incomplete and misleading except at the close of the annual meeting. For instance, the last annual report of the Treasurer showed a considerable balance on hand, but the then retiring administration had contracted sufficient debts to entirely wipe out the surplus at the close of the meeting, and there being little income except at the close of the annual meeting there is still no surplus, but the administration of our finances during the past year has been economical, and if allowed until the close of the meeting to report, our retiring Treasurer could show, we believe, a handsome balance, while under our rules he can only show a depleted treasury, and the retiring administration can be allowed no credit for its economical management of our financial affairs.

In conclusion I desire to express my earnest thanks to my fellow officers, who have in every matter shown me the kindest consideration and loyal support, and I am only voicing the sentiment of the entire list of retiring officers, when I thank all members for the unusually friendly support you have accorded us during the entire year.

PLEURO-PNEUMONIA.

A Paper read before the Royal Scottish Veterinary Society.

By PROFESSOR WALLEY.

Of late we have witnessed a remarkable recrudescence in the newspaper agitation as to pleuro-pneumonia, some of these organs, in fact, raising the subject to the dignity of a crisis; and while this agitation has largely arisen in consequence of the publication of reports by the various local authorities, of the bill of costs connected with the carrying out of the provisions of the Slaughter Order, I am afraid very much of it has had a selfish origin, and has been entered upon for such purely selfish purposes as a desire for fame, or, on the part of some, from a desire to pose as authorities on the question. But while such have been the motives of some of those who have engaged in the controversy, there are others whose sole object has been the harmless one of airing a particular hobby.

Again, there are others—"croaking pessimists" shall I call them?—who have endeavored to show that some prophecy they may have given utterance to, to the effect "that wholesale slaughter would never eradicate the disease," has been proved to have been correct by the fact that the measures now in force have failed to exterminate a malady which has been in our midst for upwards of half a century in the short space of eighteen months. Even the old cries of *spontaneous origin* and of "*the cure of pleuro-pneumonia*" have been revived; and the further statement is made that the Slaughter Order has encouraged concealment, and has neither added anything to our knowledge of the nature of the affection or of the means of dealing with it—matters which some propose to elucidate by means of experimentation. There are some correspondents, too, who still blame the large cities, as London, Edinburgh, and Dublin, for spreading the disease.

The Slaughter Order.

Having briefly reviewed this correspondence, I propose in the next place to deal *in seriatim* with the various statements and assertions to which I have directed your attention, and

firstly, in reference to the asserted failure of the Slaughter Order. Some time since, in referring to the suppression of pleuro-pneumonia, I made a statement to the effect that "if I were given a free hand I would undertake to eradicate the disease from these islands within the space of two years," but in making this statement I had in contemplation a very different method of dealing with the disease than that now in vogue. So far as it goes, the Order is radical enough in its aims, but it fails grievously in several essential points, which those amongst you who heard my remarks on the subject in this place, at the time the Slaughter Order was promulgated, will remember I directed attention to in the short address I gave on sanitation.

Concealing Outbreaks.

The Order in its present form deals only with revealed or known centers of the disease; it says nothing as to the discovery of these centers, nor does it take any steps towards the attainment of this end; in fact, according to some, it favors the concealment of these centers, and in reference to this view of the case I would ask, are there any measures that could be devised that would effectually put an end to attempts at concealment? I have known the disease for the past thirty-two years, and without egotism, I may say have had opportunities of becoming acquainted with it which have been enjoyed by few practitioners now living in this country. I say I have known the disease for thirty-two years, and during the whole of that time—when there were no measures in force relating to it, when there was only restriction and compensation, and on through the period over which the Slaughter Order has extended—the feeling has existed amongst a certain class of stock owners that they were justified in concealing the existence of the disease for their own selfish purposes; and this feeling has not only existed in reference to pleuro-pneumonia, it existed in connection with cattle plague, foot and mouth disease, and sheep scab, and it exists now in connection with swine fever, glanders and anthrax; and will continue to exist so long as the world lasts and selfish people live in it

Means of discovering Outbreaks.

Now, Mr. President, I would substitute for the term "concealed centers," the exact opposite term, "undiscovered centers," and repeat what I have said over and over again, that it is the duty of the Executive to find out these undiscovered centers:—1st, by abolishing all private slaughter houses; 2d, by establishing public abattoirs, and insisting that all dead meat shall be taken to a *receiving house* connected with these; 3d, by appointing a staff of veterinary (not police) inspectors for the whole country, as was done in cattle plague time; 4th, by making the notification of disease compulsory, and by the making of post mortem examinations of the carcasses of all dead animals by State paid veterinary surgeons compulsory; 5th, by substituting imperial for local compensation; 6th, by increasing the area of infected circles, so far as the public exposure of animals for sale therefrom is concerned, and lengthening the period of segregation. In this country segregation of infected places for fifty-six days has always been considered sufficient, and the consequence has been that very frequently immediately on its expiry, or shortly afterwards, fresh cases of the diseases have occurred. In continental countries the isolation or maintenance of the cordon extends to months; in Canada a quarantine is insisted on to ninety days; in the United States and Australia to many months; and in Denmark segregation extends over six months, or even more; 7th, by giving power to the veterinary inspector to seize and slaughter every sick animal in which the symptoms are such as to afford reasonable grounds for the suspicion that it is suffering from pleuro-pneumonia; 8th, by scheduling tuberculosis as a contagious disease, and lastly, by placing the control of all measures introduced for the purpose of suppressing not only this, but other maladies of a similar nature, in the hands of one central authority.

If such measures as these I have just sketched were enforced, it would be almost impossible for unscrupulous persons to hide the existence of the disease in their premises for weeks or months, while they, during that period, are bringing

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or sending the carcasses of the affected animals to convenient depots, and consigning the live animals to public sales or markets, and in this way scattering the disease broadcast through the country.

Will Pleuro always be with us?

And what of the cry as to the perpetual existence of the disease amongst us? You and I, Mr. President, were not alive a century and a half ago—probably neither of us recollect distinctly the occurrences of half a century since, even—but it is nevertheless a matter of history, that for one hundred years prior to 1842, pleuro-pneumonia was a stranger to this country; and looking back over the past quarter of a century, I can see in my mind's eye counties and districts free that were at one time hot-beds of the scourge. Even in this very city there has been a period of two years of absolute freedom from the disease since I have been dealing with it in an official capacity.

In Holland, Switzerland, Norway, Sweden, Denmark, and in many of the North American States, it is no more known; and in face of these facts, what right have we, I ask, to adopt the pessimistic view that pleuro-pneumonia is always to be a scourge to our herds. *Periodical epizootic waves* of this, as of all other similar maladies, have swept over our country, but there cannot be any periodicity of such epizootic waves if we take the trouble to annihilate the essential element upon which they depend. There were some who prophesied that when foot and mouth disease was suppressed we should be visited by a periodical epizootic in due course. Well, we have waited for years for this recurrence, and it has not yet put in an appearance.

No Spontaneous Pleuro-pneumonia.

The doctrine of periodicity had a worthy congener in the *doctrine of spontaneity*. Life cannot be brought into existence by fortuitous influences, and if we believe, as we are bound to believe, and as all analogy teaches us, that pleuro-pneumonia is due to a specific germ, then are we further bound to discard the notion that the disease can be induced by any

concatenation of circumstances that man can bring about. Starvation, bad hygienic conditions, exposure, ill usage, debility, and all other similar forces combined, will not produce one single case of pleuro-pneumonia. All the cases we meet with must have been due to others, and as reasoning and intelligent beings, it is our duty to find out where these other cases are hidden.

Pleuro-pneumonia Incurable.

The assertion that pleuro-pneumonia can be cured is as little worthy of consideration as is the doctrine of spontaneity, but we cannot pass it by unnoticed. In the early days of my acquaintance with the malady, I treated, and assisted in treating, as many cases of pleuro-pneumonia as most men, and at one time thought a cure was frequently effected. The fact cannot be too strongly stated that *there is no cure for pleuro-pneumonia*; a lung or a part of a lung once affected can never again be restored to its original condition, but, on the contrary, it becomes for many months a slumbering volcano, waiting only for the influence of some disturbing agency to again rouse it into destructive action.

Disinfecting Centers of the Disease.

Now, as to the large cities being, as it is asserted by some, distributing or disseminating centers of the disease, I know nothing of London, but I have learned something of Dublin, and I think it may be allowed that I do know something of Edinburgh. In reference to Dublin, there can be little doubt but that at one time it was a center from which the disease was spread broadcast through the country, but at the present time I think I may confidently say that while it is still a slight or probable source of danger, every possible means are taken to prevent the infection of the thousands of animals which are annually shipped for this and other countries at the port of Dublin. From an intimate acquaintance with those engaged in the sanitary work of the port, and with the manner in which this work is carried out, I am in a position to assert that no animals passing through the city of Dublin for em-

barkation to other ports, ever come within the range of even possible sources of infection.

In reference to Ireland generally, I have met with only one case of pleuro-pneumonia in recently imported Irish cows during the last epizootic of the disease in this city.

Now, in reference to Edinburgh, we have been frequently told that we are a *disseminating center*; I do not deny that this may be so, but we are to a far greater degree a *receiving center*. We receive animals from all the surrounding counties, from the northern counties of England and from Ireland, and these are dispersed throughout numerous grazing districts and dairying centers. We adopt every means in our power to prevent the introduction of disease, and for detecting its presence when it is introduced; but an unscrupulous dealer comes amongst us and swamps our market with an infected stock from one of those undiscovered centers to which I have already alluded, taking care at the same time not to risk the sending amongst us of any animal palpably diseased, and the result is we become the victims of the cupidity of one man, or of the supineness of another local authority, or, what is of more importance, the supineness of the governing body of the country.

Dairy Cows Spreading Disease.

Unfortunately, too, the animals which most usually introduce the affection are cows, the only class of cattle that find a home within our bounds; and one infected animal may be the means of carrying, indirectly, death and destruction into the midst of our dairies. And what remedy have we for this, or to whom are we to look for protection against it?

I have said that all that can possibly be done to guard against the introduction of disease is done, but if you consider for a moment the difficulties with which we have to contend in carrying out protective measures, you will see that there is little wonder we do sometimes become the medium through which disease is spread abroad in the surrounding districts.

Cows in an advanced stage of pregnancy, or that have just

calved, are sent long railway journeys to the city, jostled and tumbled about in railway trucks, exposed to the effects of cold, hunger and fatigue; they are put into our byres and washed from head to foot, then allowed to dry as best they may, and exposed the following day to the effects of inclement weather, and with this they are gorged with succulent food for the purpose of increasing the flow of milk, and in the vast majority of cases the lacteal secretion is allowed to accumulate to an inordinate degree, thereby inducing, with the other influences mentioned, a febrile condition, which frequently masks any evidence that may be present of the existence of disease of an important character.

So far as the spreading of disease by the dairy cows of the city is concerned, I am in a position to say that the danger in this direction is infinitesimal, as there is not one animal in one thousand sent out of our byres for any other purpose than for slaughter, and the vast majority of these cows never come in contact with store animals after they leave the byres; they are sent direct to the fat stock marts, on fat stock sale days, and are drafted thence to the various fat stock centers for immediate slaughter. The only danger that arises within the city is the returning to the market of animals which have been purchased on previous days of sale and found to be amiss after coming into the hands of the purchaser. Even this danger is guarded against as carefully as is possible.

Experimenting with Pleuro-pneumonia.

I have already remarked that a certain proportion of those who have written on this subject have advocated the adoption of experimentation on a *limited* scale with the view of clearing up doubtful points as to the nature of the malady and its cause. Now, Mr. President and gentlemen, I would ask you—of what value can *limited experimentation* be in this country, seeing that *unlimited experimentation* has been carried on in various continental countries for many years past, and seeing that much study has been devoted to the subject by men of far greater experience and with far greater opportunities than are possessed by any past or prospective experi-

mentalist in this country? I do not undervalue experimentation. On the contrary I would give it every support in my power; but at the same time I do not anticipate that substantial good can come out of it. In this country experimentation by veterinary surgeons, whether associated with biologists or not, has never been liberally encouraged, and even when attempts have been made by some of us to improve the method of inoculation, those attempts have been met with undeserved and ignorant censure, even from amongst the ranks of our own profession.

The Great Cause of its Persistence.

If the stamping out process has not taught us much, it has at least gone far towards verifying the opinions we have held as to the nature of the disease and the causes of its persistence amongst us. It has emphasized my contention of many years' standing, that the great cause of the persistence of pleuro-pneumonia in this country is the existence of infective centers of the disease in the lungs of animals which have been exposed to the contagion, but in whom there has been little or no evidence that they are the subjects of the malady. It is now some fifteen or sixteen years since I first promulgated the belief I had arrived at as the result of observation and experience, that animals which had suffered from the disease were

Living-Centers of the Infection,

and that they were a source of untold mischief. This belief or opinion was, on its publication, endorsed, in the first place, by Professor Ferrein of Berlin, and it has been accepted in this country by all veterinary surgeons whose opinions are worth notice or respect; and the result of the Slaughter Order has more than established the truth of my belief, for with few exceptions the outbreaks that have taken place in this city during the last eighteen months have been traceable to such centers of infection, and particularly has this been the case in those outbreaks which owed their origin to cows from Cumberland. These infective centres have been a source of

mischievous, too, in the case of other districts, and especially in Fife, for, with one or two exceptions, such centers have been discovered in every lot of animals that has been brought to our abattoirs for slaughter as *healthy animals that had been in contact with diseased animals*.

Wrong Conclusions.

Moreover, these infective centers are often the means of giving rise to wrong conclusions as to the particular animal which has introduced the malady ; and one example of this I will give you. A few months ago an outbreak of pleuro-pneumonia took place in an Edinburgh byre. The first case that was brought under my notice was in an Ayrshire cow that had been purchased about six or eight weeks previously at Dalkeith ; but on inquiry it was discovered that the bulk of the cows in the stock had been brought from a byre in the district of a neighboring local authority a short time before the date of the outbreak, and in slaughtering out the stock, one animal that had been purchased seven months previously from one of the lots of contaminated Cumberland cows sold in the Edinburgh market was found to have a very old encysted pleuro-pneumonia lung, or portion of a lung, in a state of active degeneration, and two others were subsequently discovered with cysts of a more recent date. In the *preinoculation period* in this city we found that in all the instances in which the disease lingered in a byre in spite of our efforts to suppress it, its continuance was coincident with the unconscious retention in the byres of cows in whose lungs old cysts existed, and that so soon as these were discovered and got rid of, the disease disappeared also.

In the *inoculative period* my experience was an identical one, and if time permitted I could give you particulars of case after case in which, in spite of inoculation, the disease continued to develop until the animals with old centers in their lungs were discovered and slaughtered.

Inoculation Impotent.

The argument that inoculation renders these old pulmonary centers harmless is one that will not bear the slightest

examination; it is based on ignorance of pathological processes, it is an attempt to deceive the unwary, and it is disproved by practical experience.

But if more evidence were needed of the impotence of inoculation as a reliable suppressive measure, it has been furnished during the past twelve months. Altogether some half dozen cases have been brought to my notice in which animals inoculated by experienced operators have contracted the disease on its introduction to byres from external sources months after the period at which they were operated on, and rendered proof or protected against the malady; but of these instances I will only direct your attention to two. In the first of these the disease was introduced by a Cumberland cow to premises in which stood, in two separate byres (*a*) a lot of cows inoculated successfully six months previously, (*b*) another lot of recently purchased cows which were only inoculated at the time of the outbreak. A short time after the slaughter of the Cumberland cow, two cows of the (*a*) lot with docked tails developed the disease, but, let it be noted, they had never been in absolute contact with the diseased cow.

In the second instance an outbreak of pleuro-pneumonia occurred in two byres in a well-known dairy district in the city, and as a result thereof most of the cows in the adjacent byres were inoculated by an experienced operator, and three months afterwards a cow in one of these byres developed the disease with exceptional virulence, and on slaughtering out the herd we did not find another case—showing that the malady must have been contracted from the affected animals in the adjacent byres.

Value of Inoculation.

Inoculation is valuable as an accessory to other and more radical measures of prevention and suppression; it never has, nor never will, eradicate the disease from any country, and those who trust to its doing so trust to a broken reed. If one attack of the natural disease will not in every instance protect against a recurrence of the malady, how can we expect

that an induced and a milder attack will protect? Even the inoculating continental countries have failed to get rid of pleuro-pneumonia by inoculation, and its failure has been practically acknowledged by the recent vote of the Paris Congress, to the effect "that inoculation can only be recognized as an auxiliary measure to slaughter, and as a reasonable cause for delay in carrying out the latter," but in the next breath it was decided by the Congress "that inoculated animals must have no other destiny than the slaughter-house." With these resolutions I cordially agree; the conclusions are those at which I have long arrived. I have stated over and over again that inoculation is only of use in the prevention of pleuro-pneumonia, and that is as a protective measure in areas or circles in which pleuro-pneumonia has made its appearance, and in stocks in those areas in which it is believed that the animals are not actually affected with the disease. Even a well-known and an experienced inoculator in the neighborhood of this city emitted a declaration some time ago to the effect, "that every inoculated animal, when fit (fat) might go straight, and by float, to the slaughter-house."

The Slaughter Method.

The method of slaughter for the suppression of pleuro-pneumonia has been dubbed a brutal and unscientific one. I would ask, in what way does the element of brutality come in, seeing that every animal of the bovine species that is brought into this world is destined for slaughter unless death from some other cause results? And as for the charge of its being unscientific, I am quite willing to admit the charge within a certain limit; but it has been proved on many occasions that it is the only method capable of bringing about the actual suppression of contagious maladies; and I am bold enough to assert that no malady of this class has ever been got rid of without its assistance.

It is obvious that such a method could never be made applicable to the suppression of contagious maladies in the human subject, although a statement has recently been going the rounds of the press to the effect that a Russian minister,

being charged with the suppression of an outbreak of plague in a village, deliberately placed a military cordon round the doomed area, and, after saturating the buildings with petroleum (or paraffin), consigned the village and its plague-stricken inhabitants to the flames, with the result that the plague was effectually suppressed.

The Stamping-out Process.

In reference to this matter, I would ask, by what means have the different contagious maladies that have at various times raged in this country been got rid of except by the "stamping-out" process? In 1862 sheep pox was introduced amongst certain flocks in the neighborhood of London; at that time, as now, there were two schools of suppressionists, one advocating inoculation, the other slaughter. After a trial of the former, and its failure, the advocates of slaughter, amongst whom (and probably the most important) was Professor Simonds, had their innings and won. In 1865-6 cattle plague ravaged our herds, and for months the scientific section of the suppressionists held the field with vaccination, introduced, be it remembered, by members of the medical profession, and, once more, after they had had their innings, the brutal method of suppression by slaughter proved the winner, as it has in every outbreak that has occurred in this country since. What but practical measures were employed for the suppression of foot and mouth disease? Have any other than practical measures been adopted for the suppression of swine fever, glanders, and rabies in this city and in other places? What has science effected in the eradication of scarlet fever, measles, typhoid fever, syphilis, leprosy, and a host of other similar maladies? Why, even in scientific Paris a resolution was passed at the Congress the other day, demanding the application of the most rigid, practical measures for the suppression of la maladie du coit.

If we want to lift the cloud that has so long hung over us, if we would regain our credit with the great stock-importing communities of the world, and remove those harassing restrictions which are in force against us in the Scandinavian

States, in many parts of the United States of America, in Australia, and even in our own Colonies, we must put our shoulder to the wheel, and spare no effort, be it never so radical in its tendency, to rid these islands from a scourge which has for long been a hindrance to the prosperity of the stock-raising portion of the community, and a disgrace to our sanitary system and to our sanitary knowledge.

HISTORY OF CONTAGIOUS AND INFECTIOUS DISEASES, ANCIENT, MIDDLE AGE AND MODERN.

By J. FAUST, V.S., Poughkeepsie, N. Y.

(A Paper read before the United States Veterinary Medical Association.)

ANCIENT.

The most ancient information about fatal epidemics of domestic animals is found in Exodus 9; 3-10.

Among the punishments known as the "Egyptian Plagues," there were two which concerned animals. In the sixth plague malignant sheep-pox appeared on man and beast and was equally fatal to both. Ovid informs us that an epidemic arose on the Island of Ægina, 1285 B. C. which at first attacked dogs, birds, oxen, and sheep, and then destroyed all the other animals and the inhabitants.

The following were the chief symptoms of the disease in animals: An internal heat; a burning fever which could in no way be checked; inflammation and redness of the skin; a dry, split, and swollen tongue; and hard breathing. Homer also informs us (Iliad I; v. 43-52) of a similar epidemic which attacked dogs, horses, asses and also the human race.

The writers of antiquity rarely mention these epidemical diseases of animals except when the progress of the disease extended to human beings, or when they existed over a large territory. Dionysus of Halicarnassus and Livy mention a series of such epidemics which occurred among the Romans. The most ancient of these arose about 753 B. C., another about 488 B. C., and another about 463 B. C. These attacked both man and beast. Other similar epidemics occurred 453,

431 and 430 B. C. Livy informs us that the last one was communicated to man by mere touch.

He called this disease "Scabies." But it is probable that he applied this name to all forms of sheep-pox. Other epidemical diseases broke out 309 B. C., and also 278 B. C. The chief characteristic of the latter was an epidemic abortion which became so wide-spread that it was feared that all animal life would die out. (Orosu Hist. IV 2).

After the taking of Agrigent, 212 B. C., a plague broke out in Sicily, a description of which is given us by the poet Silisus Italiens (Liber XIX, 580-626). This attacked dogs, horses and cattle, and seems to have been, in general, a contagious disease of the lungs. Livy reports another epidemic, which broke out in Italy during the consulship of Petilius.

The writers of this time (Cato, Varro, Lucrez), especially Lucretius, mention, beside the scabies in sheep, also another disease which was called "Ignis Sacer"—"The Holy Fire."

This is also that disease which Thucydides mentions in his description of the plague in Athens.

The nature of this disease is best understood from the description given by Virgil in his Georgus. He describes several, according to the different forms of animal life attacked. The symptoms of this disease in horses were: A sinking of strength and spirit, and a total loss of appetite; their ears droop; they paw the ground, and, a short while before death, their skin becomes dry and hard, and cold and uneven sweats ensue. Plaintive cries, followed soon after by death, were the indications of this disease in sheep. One could see them dying in heaps. Virgil advised that the hide should also be buried, since the wool could not be cleaned, either by fire or water. If anyone wore the wool, sweats would appear on those parts of the body touched by the wool, which were followed by malignant pustules which ate into the flesh. Columella also reports (Lib. page 250) that, if this disease was not checked on its first appearance, it soon attacked the entire herd. Nothing was of any help, neither iron nor medicine. The expedient of Bolus Mendesius was alone useful in checking the progress of the disease. This

was a frequent examination of the back of the sheep. As soon as the least redness appeared there the animal was immediately killed and buried, skin and all.

This disease, which seems to have occurred very frequently in antiquity, probably corresponds to that in modern times called "Inflammation of the spleen."

Plinius and Celous, later on, made the name "Ignis Sacer" cover all sorts of inflammation of the skin having the nature of erysipelas.

The "dry scab" was another disease which frequently arose in Italy and caused great mortality among sheep.

Virgil considers that a cold rain, producing a salty sweat and allowed to remain on the skin of sheep after shearing, caused this disease.

The Malleus of Vegetius was a widely spread disease of solipeds which also attacked cattle.

Both glanders and hydrophobia must have been diseases long known, as ancient writers of different periods have described them. Aristotle himself describes glanders as a sickness of asses under the name "natis" its chief symptom being a tenacious ropy discharge from the nose.

Apsyrtus also mentions this disease; dividing it into two forms, the moist and the dry.

A similar fatal epidemic of animals occurred during the so-called "Plague of Antonin," 190 B. C.

The nature of this epidemic, however, is not known.

Cardinal Baronius also mentions an epizootic sickness which arose after the predatory incursions of the Huns, and extended from Pænonia to the southern part of France.

The symptoms were, according to the poet Sulpitius Severus, a total loss of appetite, sudden loss of strength, dizziness, spasmodic convulsions of the limbs, swelling of the abdomen, followed very quickly by death.

Suckling calves rapidly died away, drawing the sickness from the diseased udders.

MIDDLE AGES.

It is a well known fact that long wars are generally fol-

lowed by the appearance of epidemic diseases which attack both man and animals.

In like degree can the frequent appearance and great extent of epidemics of animals be attributed to the continual wandering of tribes, while searching for new locations, and to the incursions into Europe of the nomad tribes with their immense herds. The space of time between the sixth and fifteenth centuries was marked by no fewer than thirty-two epidemics; the greater part of which attacked domestic animals in general, while only a few attacked single species. In a few, men and animals were alike attacked. Their extent varied widely. Some embraced all Europe, while others attacked only a few countries. France, Germany and England were the most frequent sufferers, while Spain and Italy were seldom affected, and then only over a small area.

We know very little concerning the nature of these epidemics, as there are no descriptions of them extant, and as only the time of their disappearance and the ruin which followed them were recorded. They are designated, in general, as "pestis" or "pestilentia," and are said by the chroniclers to be due either to excessive rains and floods, hot and dry summers, failure of crops and the resulting famine, comets, earthquakes, or similar causes. In many cases the disease was, undoubtedly, cattle-plague brought into Europe from the East by nomadic incursions. In other cases, the disease was "Anthrax," called even then "Ignis Sacer." When it attacked horses (as most frequently in Italy) the predominating symptoms were those of diseases of the chest.

The first recorded epidemic, arising in South France, and continuing at short intervals from 581 to 590, attacked cattle and horses, and, at its last appearance, even deer and other wild animals. Gregor of Fours writes of wonderful cures achieved by oil from the lamps of the church of St. Martin, or by burning crosses fastened to the foreheads of diseased cattle.

In 791 so great a plague broke out among the horses in the army of Charles the Great, that barely a tenth part of them remained, and Charles was forced to give up the cam-

paign against the Huns in which he was then engaged. In 801, after an earthquake in Rome, there arose an epizootic which extended over the dominions of Charles the Great.

The following epidemics are also reported :

809. A cattle plague spreading out from east to west. During Charles's campaign against the Witzen on the banks of the Elbe and Weser, so terrible a plague arose, according to the annals of Einhardt, that almost all the cattle perished. It also raged, not less terribly, among the other provinces. Soon after a plague-like disease, attacking both man and beast, was observed; this arose after long rains and great floods.

850. A destructive epidemic among the cattle in France.

868. In France all kinds of domestic animals perished in great numbers; also in 870.

878. Cattle plague in Germany on the Rhine.

887. An epidemic in France among cattle and sheep, causing heavy losses.

896. An epidemic broke out among the horses of Arnulph's army during his retreat over the Alps; shortly before and probably at the same time epidemics broke out among cattle, sheep and swine all over Europe.

940-942. Plague in France and in Germany among the ruminants during the last year. These were so severe in France that almost all the cattle perished.

987. An epidemic attacked both man and cattle, the latter being known as "Scittas" or "Schittas" in England. This was likewise very fatal.

992-995. A disease attacked both man and beasts (Agnis Sacer.)

Diseases of animals further occurred: 1044, in Germany; 1048, in England; 1059, in Germany; 1085, in France; 1086 and 1087, in England; 1089, in Lorraine (Agnis Sacer); 1092-1094, over all Europe; 1098, in France (Agnis Sacer) and in Syria during the siege of Antioch; 1111, in England, also 1124 and 1125 among all domestic animals; 1127-1129, in France; 1131, in England; 1171-72, over all Europe; 1213, in Spain and France.

From the beginning of the twelfth century till 1241 took place the incursions of the Mongolians, who, as is well known, penetrated to Silesia. To these incursions may be traced the origin of the disease of cattle which broke out in 1223, 1233, 1235, and which undoubtedly was the cattle-plague. The first lasted three years and spread out from Hungaria over Italy, Germany and England.

"In the year 1223 there was a great mortality among cattle and people, which lasted three years, so that the greater part of the cattle perished;" says the Chronicler.

In the years 1223 and 1225 a similar disease attacked horses and chickens.

1252. An epidemic of anthrax raged in England.

1301. Laurentius Rusus speaks as follows concerning an epizootic which arose among the horses at Rome: "The horse hung his head and refused to eat, its eyes were watery, the iliacs continually beat." This disease was epidemic, and from the year 1301 there died in the city more than a thousand horses. In 1313 a similar epidemic broke out again in Rome.

In the great epidemic which attacked men, called the "black death," horses, cattle, sheep and goats also fell victims.

1375. A great plague broke out in Germany, confining itself to wild beasts, which attacked deer, wolves, bears, wild boars and foxes, and almost entirely destroyed them.

MODERN.

Modern diseases of cattle have been just as frequent and devastating as those of the middle ages; attacking not only all the species of domestic animals, but also game and fowls. Especially frequent were "anthrax," chicken-pox, influenza among horses; and still more frequent, the cattle-plague, which at times almost entirely destroyed the live stock of Europe. In many cases these plagues broke out together with or as a result of epidemic, as, for example, the small-pox, commonly called the "black death." Others were caused by small harvests, which caused famine. They were also greatly aided in their devastating career by the numerous wars of this period, especially the Thirty Years War, the war of the

Spanish succession, and the Seven Years War, accompanied by the total lack of sanitary measures, which were first introduced in the beginning of the 18th century. More complete and better descriptions are extant, written by physicians who made an accurate study of the phenomena and the course of the epidemics. We are therefore in a better position to decide what diseases were involved in the several epidemics. Fracastoro has left us notes on one of these, which appeared among the cattle in Italy in 1514. It was first observed in the Friul, whence it spread into the territories of Venice, Verona, and later into France and England. The principal symptoms were: loss of appetite and inflammation of the palate, the mucous membrane of which was covered with pustules; soon after a rash appeared on the shoulders and limbs. If this did not appear, the disease generally proved fatal.

Some authors, as Dupuy, think that this disease was small-pox, others consider it the "cattle-plague" (Louiser.) Heisinger, however, calls it stomatitis aphthosa maligna. In the following year (1515) a very destructive plague raged in France, called "tac," of which no description is extant; it is also unknown from what source the name is derived. Belon, a physician of the sixteenth century, conjectures that it is named from the "talsol" (an ampyreumatic oil, known now in the Languedo as "Oil de Cade") which was used extremely as a remedy for the disease. Paulet, however, believes that the disease was named from its contagious nature, it being transmitted by touch. Probably it was the same disease as that which broke out among the cattle in the preceding year. In 1552 an epidemic broke out among the cattle of Lucca, which proved very fatal. Thomas Wierus relates that while the farmers killed the diseased cattle, if any blood spattered on them, carbuncles soon after appeared. It was probably anthrax. In 1568 Joubert, in his work concerning the plague, for the first time mentions the pox among sheep, which he observed with Rabelais in the neighborhood of Montpellier. In 1599 a very destructive epidemic raged in Italy, simultaneously with the pox there and in France. The Senate of Venice issued (according to Ramazzin) an edict for-

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bidding the sale of beef, butter, milk and cheese, fixing the penalty of death for the offense, in order to prevent the possibility of the disease attacking the people.

In 1610 an epidemic broke out in Alsace, together with the pox, which seems to have been gloss anthrax of a species of stomatitis aphthosa and which was, according to Mercurialis, transmissible to man. In Venice it was called "Gian-dussa." A species of cattle disease broke out in Saxony (1643) called by Weeks the "flowing plague," which proved fatal to many thousand head of cattle. The only remedy was to mate the animal with a horse; if this was done before infection, all danger was averted.

Thomas Partholinus reports that a sort of frenzy attacked animals in Denmark, after a very hot, dry summer in 1661, making them almost wild. It attacked both horses, cattle and sheep. On examination after death, one or more worms were found in the brain.

In 1682, while the plague was raging all over Germany, a very destructive epidemic broke out there and in France, Switzerland, and Poland, called the "flying cancer" or "tongue cancer," doubtless, however, anthrax of the tongue. This disease spread with extraordinary rapidity. Vogel says in the Leipzig Annals, "This disease spread in twenty-four hours over an extent of territory two miles long by four broad;" and Dr. Winkler, physician to the Elector of the Palatinate, reports "that the disease did not appear simultaneously in different places, but that it kept a fixed course, without missing a village on its route; the under side of the tongues of the diseased cattle became covered with white inflamed pustules, which in a short time encircled the tongue, and if no remedies were employed, the tongue fell from the mouth in twenty-four hours, causing the animal's death. After death the tongue was found to be rotten and eaten away; in some were found traces of malignant quinzy, in others traces of milt. It was observed, both in Germany and France, that those who attended the diseased animals were themselves soon attacked. The most effective mode of arresting the course of the disease was to scrape the tongue with a piece

of silver or iron until blood came, and to wash out the wound with a mixture of vinegar, pepper and salt. A case is known where a man died of the disease through eating from a spoon with which scraping had been done.

In 1690-'92, a great mortality existed among the cattle of North Italy, simultaneously with the intermittent fever among the inhabitants of that part. Ramazzini thinks that it was caused by spoiled fodder which had been covered by sour mildew. The leading symptom was the breaking out of pustules on the head, neck, and on the shanks, which resembled the pox in form, color, size, and the course of the disease. Most of the diseased animals became blind or died from exhaustion and loss of strength. Swine died in droves as if choked to death. In the summer of 1691 the sheep were almost entirely destroyed. In 1692 Hessa lost the greater part of its cattle through a malignant disease of the lungs. Valentine says, that on making an examination, the lungs were found to be turned into matter. He thinks that the causes were a sharp, bitter frost, and a severe cold. The first case of pox attacking sheep ever known in Germany, occurred there in 1698, a description of which is given by Stegman. Of the epidemics of the eighteenth century our attention is first claimed by an epidemic among horses in the beginning of the century.

In 1702 it was observed on the banks of the Rhine and in Lombardy, and in the following year on the banks of the Oder.

In 1704 it spread into Poland, Alsace and the Netherlands, where it raged so much that all commerce with England was forbidden. It lasted till 1705 in Poland, Saxony, and on the Rhine. The cattle plague, however, possesses the most interest for us. It was first observed (1709) on the boundaries of Europe and Asia, and in the Tartary regions; Kanold, in his early history, is uncertain whether it first broke out in these regions, or whether it was brought over from Asia, or was a "malum endemium" in this region, as the small-pox in Egypt and Turkey.

It was first observed in Astrachan, on the banks of the Don

and Volga, from whence it spread out to Casan and Moscow, where it caused great ravages among the cattle and horses, especially the latter. Nothing special is known about the nature of the disease, except:

1st. That it was very contagious, even when it first broke out.

2d. That it killed the cattle in great numbers very quickly.

3d. That there was no known remedy.

4th. That it spread slowly over the adjoining territory.

5th. And that it spread out in a few years over very many rich lands, even with the best food and weather.

This disease continued until, in after years, more attention was paid to its character and form.

In 1710 the cattle-plague broke out in Russia in the provinces of Rusal, Woratin and Moscow.

In 1711 it spread out through Poland to Silesia, Brandenburg and Prussia, where it raged in the neighborhood of Hoenigsberg. In Silesia it appeared around Ohlan and Brieg, and was so fatal that the streets at times were filled with dead cattle. From Hungaria the plague reached Steirmark, Austria, Bavaria, Swabia (in Augsburg it appeared at the end of summer 1711), Dalmatia and Italy.

It was brought into the latter country by Dalmatian traders who brought droves of cattle from Hungaria into the Venetian territory. From there it spread into the Milanese territory, and also Genoa, Ferrara, the Roman territory, and then to the Kingdom of Naples. In this period Ramazini and Lancise wrote their admirable description of this disease. This disease usually began after a heavy frost followed by intense heat. The respiration was labored; a thick slime possessing a very acute odor flowed from the mouth and nose. The very frequent passages had a very fetid odor, and were often streaked with blood. The ruminating ceased, and pox broke out on the fifth day whose similarity to the small-pox caused Ramazini to name the disease "oxen small-pox." Death occurred from five to seven days. Lancise, however, claims that the disease was the true "plague," and was identical with the Greek "Nadis." On making a post-mortem examination

the following was found: a black mass of hay in the first stomach; water-blisters on the surface of the intestines, which possessed a very fetid odor as soon as opened; and sores on the root of the tongue and water-blisters. Both the authors unite in the opinion that cauterizing and the seton were the best remedies. Several internal remedies were also recommended: camphor with gentian, tormentil, centanry, etc.

The mouth of the animal was washed out with a mixture of salt and vinegar. Schroeck thus describes the disease: "It is a well known fact that the disease is infectious. The spittle, which was scattered by the sick cows while pasturing, transmitted it to the rest. It is, doubtless, a malignant dysentery." In 1712 this plague spread out from the Tyrol and Switzerland and through Germany to Thuringia and Saxony; from Franconia into the States of Newberg, Anspach, Ramberg, Wurtzberg, Baden, on the Rhine, in the Palatinate, Alsace, Lorraine, France and Holland, in which country alone over two hundred thousand (200,000) head of cattle died. In Russia it spread out over Novgorod, Petersburg, Ingria, and Livland. In Italy the Piedmont was the only country not immediately attacked. It broke out there in 1714 with such violence that seventy thousand head of cattle perished. In the same year it appeared in England, also causing a loss of seventy thousand head. By Lancisis' advice all the infected cattle were killed; over six thousand cattle being destroyed in this manner in the counties of Middlesex, Essex, and Surrey alone. By this means the epidemic was stopped in three months.

The English were, therefore, the first to make use of this method, which now is generally employed. In 1715 the epidemic lessened somewhat. It yet existed in Holland, the northeastern part of Germany, several cantons of Switzerland; in Milan, Piedmont, Lucca, and in several districts of France. Inside of a few years it had entirely disappeared, except in the province of the Scone, where it raged violently as late as 1721-'22. Isolated cases appeared later, especially in Hungaria, Prussia, Silesia and Bavaria, without, however, spreading any. A new outbreak of the cattle plague occurred in 1724.

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Starting from the boundary of Poland, where it never totally disappeared, it spread into Germany, where it caused great devastations, especially in Thuringia and Saxony; in 1728 it invaded Brandenburg and in 1729 Austria; in 1730 it broke out again in Saxony and extended to Istria, Friaul and the Venetian States. It spread still further in 1735-'36. A Venetian bulletin issued on the 9th of October, 1735, announced that the plague existed in Friaul, Basanese and Trevigiano. December 3, of the same year, it already had spread over Verona, Brescia, Crema, Mantua, and Milan; shortly after it entered the Roman district and the Piedmont, where it remained till 1739.

Between 1740-'50 it spread again over all Europe. Starting from Hungaria it quickly entered Bohemia, Bavaria, and southern Germany, remaining there till 1745.

In 1742 it was brought into the Lorraine. In the same year it entered, from the Swiss side, the Dauphine and Franche Compté, and in 1745-'46 caused fearful losses throughout France. It entered Saxony and Thuringia again in 1746. It was carried into Italy through Piedmont, during the wars of 1744-'45, and through Menetia, when it first ceased in its terrible career in 1749. Its fearful power was most felt in Holland in 1744-'46, when over two hundred thousand head of cattle perished. In England the epidemic broke out in the vicinity of London, whence it spread over the whole kingdom, lasting there longer than in any other country; first lessening in 1758. Isolated outbreaks occurred even as late as 1780. During the third year of the epidemic, killing the infected animals was again tried with but little effect; although eighty thousand cattle were killed in that year alone. Nottinghamshire and Leicestershire lost over forty thousand head in 1747, while Cheshire lost thirty thousand in six months.

In 1745-'49 the cattle-plague arose in Denmark and Sweden, 1747-'53, in Curland and Livland, and 1750 in Prussian Lithuania. Isolated outbreaks, embracing but little territory, were observed in 1757 in Minden (2), where it was brought by the French army, and also in 1758-'59 in Brandenburg. Europe's total loss in cattle between 1740-'50 is esti-

mated at 3,000,000. Other epizootic diseases of domestic animals occurred besides the cattle-plague. In 1712 an epidemic broke out among the horses around Augsburg, which later attacked also cattle, swine, geese, turkeys and deer, and which seems to have been anthrax according to the description of Schroeck. Another very fatal epidemic broke out at about the same time in Russia, Lithuania, Podolia, Volchynia, Moldau, Wallachia, Prussia, Pomerania, Brandenburg, in fact throughout Germany, in Belgium and in the north of France.

It moderated only when winter arrived. It raged especially among the horses of the army, so that sometimes some companies had hardly twelve horses fit for duty. It was noticed even in Italy, in Naples and Rome, and was called "an epidemic horse fever," by the Italian physicians.

Lancisius has also left us a description of this disease. "It had both an acute and chronic form." In the acute form a severe chill attacked the animal; it lost its appetite; the activity of the skin ceased, causing cramps and an inflamed condition of the intestines and of the kidneys. Death occurred in forty-eight hours. On making an autopsy the intestines, stomach and diaphragm were found to be inflamed. In the chronic form the animal lost its appetite and hung its head; the throat was swollen, breathing became labored, and a sort of rattling was heard in the throat; the animal became very uneasy. If the hair lost its lustre and smoothness, if the urine did not pass, and cramps followed by cold sweats occurred, the animal generally died.

If, on the contrary, a tenacious slime flowed from mouth and nose, if a bad-smelling urine passed off, and if the limbs swelled up, the animal recovered. Heisinger is inclined to identify this disease with our influenza. In 1714 an epizootic arose among the sheep. In the kingdom of Naples over 50,000 sheep and lambs perished. The same mortality among sheep and goats was further observed in Poland, Prussia, Silesia, Saxony, Franconia, Bavaria, Swabia, Austria, Hungaria, France and Holland.

The disease was probably the cattle-plague, the occurrence of which, among sheep, is pretty well proven. Kanold gives the following description of this disease;

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"The sheep began to tremble and soon became so weak as to lie down, though they continued eating; they had no geding." The head and neck often were swollen up, which was thought a very bad sign. The pregnant sheep generally aborted, or, if not, had "ubera flaccida" and "defectum lactis." The beautiful white wool turned into a dirty, dark color as if filled with sand. In this condition death set in in four days, or, at the most, in seven days.

On making an examination considerable water was found between the hide and flesh; the viscere were inflamed; the gall was large in some, in others small; the lungs were inflamed and sometimes even rotten, and the heart was weak and flaccid. This disease was very contagious and was often carried about from one place to the other by the shepherds in their clothes. Colerus thinks it the result of unhealthy, hot weather. In 1714 the "flying cancer" raged among the sheep in some parts of France and also the pox there and in Italy. The society of Geneva physicians (*Reflexions sur la maladie du gros bétail par la soc de med. de Geneva, 1716*) has left an accurate description of this disease, called in France *clavean*, *clavin*, or *clavelee*. They report that about five per cent. of the cattle died, and that no remedy was known that was of any use.

In Silesia and Bohemia, after a very hot and dry summer in 1718, different kinds of diseases broke out among domestic animals.

Kanold reports that the scourge was very widespread among the horses in one district. This sickness affected the tongue, which became full of pustules and holes, hindering their eating. In several districts the sheep commenced to cough. In the districts of Frebnits it was reported that the acorn-swine in the woods were affected with a sort of scourge which was very fatal. In the district of Medzibor, during the month of July an epidemic arose, boils breaking out on the neck and choking them; if these were opened in time there was hope of saving the animal. In 1719 the pox broke out among the sheep in the same countries and also hydrophobia between 1721-'24.

1723-'24. Silesia, Poland and Prussia again suffered great mortality among domestic animals.

The following epidemics are also reported:

1726. Anthrax in Poland, Silesia and Saxony, among sheep in Eichsfeld and Thuringia.

1731. Epizootic angina (the strangles) among horses in England. In the months of November, December, January and February, 1832-'3, epizootic of influenza broke out among the horses of England, which was described by Gibson. Also in 1734 an epidemic, described by Bartlet and Gibson, was observed and named by Heisinger an exanthematic fever.

1731-'32. The flying cancer of the tongue in France, Germany and Italy. In the spring of 1731 this disease was noticed in the Dauphine, Auvergne and the Borbonais, spreading afterwards over all France and the Rhine, and being observed soon after (1732) in Frankfort and Nassau, from where it again spread to France. Through the Palatinate, Witemburg and Baden it reached Switzerland and Savoy, and from the latter Italy. Scheuchzer gives us a detailed description of the disease in his before-mentioned work, the quoting of which would occupy too much time.

1740. The pox raged among the sheep in the neighborhood of Beauvais and again in 1754, 1761, 1762. Barbaret has left us excellent descriptions of the same.

1755. A disease of the mouth and claws broke out in Franconia as related by the following description: The first external sign of a diseased cattle was a lameness either in the front or hind foot. On making an examination of the foot it was found that the claws were festered, sore, heated and swollen. The mouth presented the same appearance. Both sides were a whitish-yellow, swollen, puffed up and full of sores, while a swollen blister covered the tongue. An internal heat was also noticed and an uncontrollable desire to drink, accompanied by foaming at the mouth. The lameness and other symptoms disappeared when the burning yellow water had passed away and the diseased skin had peeled off. Where the disease had developed, more swellings appeared on the teats of the diseased cows, which lasted longer than

those on the head and feet. There were no deaths reported from this disease, which attacked also horses, swine and sheep.

1756-'59. Pox broke out among sheep in Saxony, frequently causing loss of eyes or lips.

1757. An epidemic raged among the horses in Esthland, Livland and Finnland, through which, in the Dorpatian district, 1,500 horses died in seven weeks only; cattle also caught it. It seems to have been the "Siberian Plague" (anthrax.)

1761. An epidemic of anthrax (described by Reginer and called "Lovwet or Lobet" broke out in several cantons of Switzerland, causing great loss among the cattle and horses; it crossed over into Austria and France, as did pox among sheep.

In this year an epidemic arose among dogs which had never before been observed, as the physicians were not acquainted with it. In 1761 it appeared in Spain, where it continued till 1763. In the latter year it appeared in England and from there carried to the Bolonais.

Toward the end of this year it attacked the royal stud in Versailles and spread over the whole of France, raging till 1765.

In 1764 it extended into Bohemia and Franconia, and later into Italy. The dogs coughed, were tortured by intense heat, and swallowed with difficulty. In two days a pussy mass flowed from the mouth and nose; on the sixth day of the sickness very many died. The disease seems to have been "angina." The French descriptions of this disease are much better and more complete than the German. (Desmar; *Journal prac. de med. veter* IV. p 610.)

1762. A very fatal epidemic arose among horses in Denmark and Sweden, which Heisinger thought influenza. The sheep-pox also arose in several parts of France, and anthrax in Switzerland, Lorraine, in the Valle Cominice, in Italy and Austria.

I find the following statement:

From the middle of the seventeenth century to the be-

ginning of the eighteenth century, the losses in Europe between 1740 and 1750 to be 3,000,000 of cattle. In Denmark alone between 1745 and 1752, over 2,000,000 died. Up to the eighteenth century Germany lost 30,000,000 cattle. The loss of all Europe was 200,000,000. The immense losses sustained at that period were the cause of founding veterinary colleges. Lutz reports that in 1783 there were not less than 1,000 works on this disease.

Athanasius Kirchner describes a disease among oxen in 1617. The same disease attacked man, and 60,000 people died of the disease.

REPORTS OF CASES.

A SINGULAR CASE—WHAT WAS IT?

BY DR. G. A. LATHROP, D.V.S.

The subject was one of those delicate breed of dogs known as Italian greyhounds. When first seen he was lying upon his mistress's pillow, his head, one forward leg and one hind leg being moved spasmodically continually. I, of course, expected to receive a previous history of distemper, but upon asking for it, was surprised to be told that the dog previous to this had enjoyed perfect health. I then tried to obtain what history I could get, but with unsatisfactory results. All she knew about him was that the day before I was called he appeared lame in his right forward leg, and that now he was able to walk with the greatest difficulty, in fact, only crawled along. Upon examining him carefully I found that only the muscles of the right side were affected, the muscles of the left side being in a perfectly normal condition. The pectoral muscles of the right side were contracted to such an extent as to draw the right forward leg across the left forward leg, and he had no power to place it in a natural position, and if placed so it would be immediately drawn back again and all the time, together with all the muscles of the right side, were kept in a constant motion. Appetite was good and noticed things around him but seemed to have lost all power of co-

ordination with the right side. When placed in a standing position he would stand upon three legs, but the moment he would try to walk would fall down and could not rise without assistance. What I had to deal with I did not know, gave no diagnosis but gave a very doubtful prognosis, and treated symptoms accordingly. I placed him under bromide of potassium gr. ii, doses every two hours until relieved, or until seen again. The next day I found him somewhat improved, the twitching now being confined to the forward leg and neck, he having taken gr. xxiv of the bromide. Lengthening the time of administration to every four hours, I left to see him next day.

The next day he was worse, being the same as when first seen, and I was told that his bowels had not moved since he was affected, but urination was performed naturally. I had suspicion of paralysis of the bowels, and upon examining rectum found it full of fæces. I removed what I could with my finger and while doing so he had no tenesmus whatever. He did not seem to notice me. The sphincter ani would contract upon my finger, but the rectum felt flabby. After removing what fæces I could, I gave an enæma of warm water and soap, which was retained, left direction to give another enæma in about two hours if he did not have a passage, and also placed him under bromide, same dose every two hours.

I called next day to find that my little patient had died during the night, and that the owner said he seemed as if he was paralyzed all over just before he died.

Post-mortem revealed nothing as I could discover.

I send you a report of this case in hopes that some of my colleagues who have had more experience in canine pathology may know what it was I had to deal with. As far as I am concerned I must confess my ignorance. I could find nothing in my works, nor in a physician's library which described anything like it.

A TUMOR OF THE SPLEEN.

By A. E. DERWENT, D.V.S., Waverly, Iowa.

On November 1st I was called to see a stallion belonging to Edward Knott & Co. importers, at Waverly, Iowa. He

commenced to lose flesh suddenly and would eat only about half a feed; appeared dull without any fever; had a slight dropsical swelling under the chest. I prescribed iron internally, alternating with vegetable tonics. He continued to lose flesh and showed signs of ascites. The mucous membranes were very pale. He almost entirely lost his appetite in about six weeks from the time first noticed. After this time, feeling that there was water in the abdominal cavity, paracentesis abdominis was performed and about two gallons of reddish serum was taken away. It appeared rather bloody looking. About a week after this the stallion died, and at post mortem a large tumor was discovered connected with and firmly adhered to the spleen. (It was a fatty tumor or lipoma.) It weighed soon after taking out 38 pounds. Has anyone ever seen one as large as this taken from the spleen or any internal organ of this species?

FRACTURE AND DISLOCATION AT THE ATLOIDO-OCCIPITAL JOINT.

By F. ALLEN, D.V.S.

I had a rather curious case yesterday which I think must be uncommon. Three days ago a gentleman came into the office and said he had a small dog which in jumping out of the buggy had been struck by the wheel and hurt. He had been unconscious for several hours and could not stand; I asked him to bring the dog round, but he did not do so till yesterday, seventy-two hours since the accident.

The dog, a black and tan terrier, three pounds weight, seemed bright and conscious; could drink milk when put before him and could move all his limbs, but was unable to stand. His head was drawn round towards his right shoulder and on the left side of his neck the wing of the atlas projected considerably, and on moving the head from side to side considerable crepitation could be heard.

I destroyed the dog by the owner's request, and on post-mortem found the following lesions: there was a dislocation of the occipito-atloid articulation, rupture of its ligaments and

the right condyle of the occipital bone was fractured. I think the dog could have lived, as seventy-two hours after the accident he was apparently in good health.

OUTBREAK OF SPINAL MENINGITIS.

By A. W. AXFORD, V.S.

I was called on Tuesday afternoon, Jan. 7th, to the farm of Edward Emmons, near Pottersville, Hunterdon County, N. J., the owner having requested me to come out there to see his horses, a singular and thus far fatal disease having broken out among his farm horses. The history of the cases described by him are as follows:

On New Year's day he drove two of them to Morristown and back, about twenty miles each way. Got home quite late; horses were very warm and sweaty when put in stable; waited until they were quite cool, then gave them their regular allowance of food and water. Food, four quarts oats (as sample) with hay, timothy and red top (as samples sent). About midnight he heard noise in stable, and on going there found one of them down and struggling hard with forward feet, with sweat pouring off in streams. He called a local horse doctor, who said the trouble was colic, the result of an overdrive, and treated for same; before morning the horse died.

Their attention was then called to the mate. A trembling was noticed in the hind limbs, and stiffness of the jaws; in less than one hour he fell down, and struggled violently with his forward legs, going round in a circle until death ended his sufferings two days after.

Before the second horse died the owner noticed an aged filly in the same stable seemed to have difficulty in chewing her food; would take in a mouthful of hay, chew it very slowly, then quid it out in a ball. The doctor said it was a good thing he had noticed it so early, as there would be no difficulty in keeping her on her feet by giving proper treatment. But soon after she began sinking down on her hind limbs, great trembling of limbs, and at last went down alto-

gether. This mare I saw three days after, or just before she died. (Two others in the same stable having begun quidding their food occasioned my being called.) I had no chance of conversing with the horse doctor, as he cleared out, bag and baggage, when I arrived on the ground.

I made an examination of the aged filly, and found hurried respiration, pulse 70, temperature 108° ; ordered her destroyed, which was neglected three hours, when she died; there did not seem to be any stiffness of the jaws.

The examination of seven-year brown horse proved as follows: respiration about normal, pulse 38, temperature $104.7-8^{\circ}$; deathly coldness of hind limbs, with trembling of some.

Examination of the other horse found pulse 38, respiration about normal, also temperature about 100° , with no stiffness of the jaws in either case, but quite some paralysis of the tongue; seemed to chew very slowly, but did not have the power to work the food back to swallow it; bowels of each very much constipated.

After taking all the facts into consideration, I made no hesitancy in diagnosing all the cases as "spinal meningitis," and at once began treatment for same, and ordered entire change of food and drink for every animal on the farm; there were some seven or eight on the place that were not affected; changed all well animals to other quarters, disinfected all the stables with thymo cresol, and gave all a cathartic of burnt aloes, 8 drachms.

I visited the place again yesterday; had more time to examine the food fed formerly. The oats were gathered during the heavy rains of last July, and is the worst lot I ever saw, and is not fit to feed to sparrows; the hay is very bright; I picked up some samples from the hay loft; part of each I send you.

The stock was watered from a well near the barn; water is very hard; the soil is what is known as red shell; the well is driven through rock of this kind; the water we are now using is from the cistern at the house. The horses are improving under treatment, and no new cases are developing.

Will you be kind enough to advise me by letter, after carefully examining the food sent, if you think the grain that was fed for weeks previous to sickness was cause enough for this disorder. Please send bill for services, and I will cheerfully remit you. An opinion from one standing as high as you will give general satisfaction to stock men in that vicinity.

VENTRAL HERNIA.

By G. HESS, M.D., D.V.S.

On October 9th I was called to treat a colt about five months old that had, the night previous, received an injury in the right hypochondriac. The wound was produced by the horn of a cow, and extended through the abdominal walls into the cavity, from which protruded a fold of peritoneum more than two feet in length. From the strangulated condition of the protruding mass we decided to excise it, and did so after applying a carbolized gut ligature close to the abdominal parietes.

After cleansing the proximal end we returned it into the abdominal cavity and sewed up the wound in the skin and subjacent muscles with gut sutures. The wound healed rapidly and the animal never refused a single feed nor in any way seemed to suffer, except a slight soreness, from the loss of so great a portion of peritoneum, which when extended was fully eight square feet in extent.

OBITUARY.

DR. JEAN MATHIAS WEHENKEL.

We have received the sad news of the death of Dr. Wehenkel, Director of the Veterinary School of Brussels, which took place on the 17th of January, at the age of fifty years. As a Doctor of Medicine he was held in high esteem, and his name was familiar to all interested in medical and veterinary literature, to both of which he was a liberal contributor. A member of numerous scientific societies, he wore the decorations of several orders, and was an Honorary Fellow of the

Royal College of Veterinary Surgeons. He edited the *Annales de Bruxelles*, published a work on the Elements of Anatomy and Physiology, translated Roll's Practice into French, and wrote a variety of pamphlets on subjects relating to the diseases of domestic animals.

CORRESPONDENCE.

GRADUATES AND NON-GRADUATES.

DEAR SIR,—Inclosed I hand you three dollars for the REVIEW for 1890. I am much pleased with the magazine. I have been practising veterinary surgery for over thirty years. I traveled over these prairies when they were thinly settled in company with an itinerant Methodist preacher, he in search of the lost sheep of Israel, and I in hunt of fistulated horses. We both met with varied success. He was more lucky in finding, but I had more luck in redeeming those I did find.

It seems to me that some of your correspondents stand in terrible fear of non-graduates, and are urging stringent legislation to protect them in the practice of their profession. Does Mr. Bonner, when he drives Maud S. out, tremble with fear lest some drayman may whip up and pass him on the road? Does the man with real, solid attainment in any profession, and having within him a consciousness of ability and power, ask legislative protection from competition?

It might open the eyes of some of these weaklings who are begging to be protected from the rivalry of non-graduates if they were to visit the offices of some of them in this western country, and take a look through their libraries, where are to be found all the standard works of both Europe and America on veterinary science. But what would still more surprise them would be to see them daily effecting cures of diseases considered by the graduates as incurable, for instance, puerperal apoplexy and tetanus. If it would not be presuming too much I would here give their methods of treating—and curing—these diseases in nine out of ten

cases. In traumatic tetanus the day of heroic medication has passed with us. We aim to inform ourselves as to nature's methods and then as far as possible imitate them. In tetanus, by supporting the powers of nature, through mild and sanative processes, we carry the patient through to a safe termination of the disease.

I asked a non-graduate what veterinary works he regarded as the best. He replied that he read all, and what accorded with common sense in any of them he accepted.

Within the last two years there dropped suddenly into our midst a European graduate, with three diplomas, a silk hat and a pocket full of cigarettes. He was free in his denunciation of this "blarsted" country, and recommended all non-graduates to "go west" as he was about to "occupy the land." He began his display of knowledge and skill by tackling an old and confirmed ringbone that even a quack would know was incurable. He gave it fits in the way of burning. The leg swelled to the body and on the eighth day the horse died of lockjaw. In another case he opened the bursal sac to reduce the enlargement of a thorough-pin. Death ensued. His glib tongue failed to satisfy the owners that he had not been guilty of malpractice; and he departed leaving behind him a remembrance in the shape of an unpaid board bill. I have since learned that he is now occupying the honorable position, so well suited to his attainments, of janitor to a livery stable in a western city.

The stock men of the west are well versed in their business and not easily imposed upon. They can recognize a fraud even under a silk hat, and they can discern ability under a homespun jacket. Doubtless there are non-graduates practising veterinary with no mental equipments other than they were born with, and to whom nature exhibited no liberality in this regard; but they deceive very few. The man who understands his business, whether graduated from a veterinary college or from the school of experience, will, as we say out west, get there with both feet.

The knowledge needed cannot be acquired by a few years' study of books. This must be supplemented by practice;

and the man who takes practice in one hand and the books in the other, though he may never have seen a college building, will be the successful man in any profession. The successful practitioner must be a man of tact as well as of technical knowledge. He must be able to get away from the books, reason from cause to effect, and form an independent judgment. We have non-graduate veterinarians out here who are in the front rank. We have also graduates who do honor to the profession. Our State Veterinarian, Dr. Caswell, is a fair sample of the latter. He is not afraid that some ragged non-graduate will push him to the rear.

We have, I believe, here in the west, all the diseases incident to this continent, besides the dreaded French contribution *maladie du coit*, but happily this latter is rarely met with. And our practitioners must be prepared to combat them when they meet them.

I notice that many new remedies are on the market. I have not had occasion to try them, but hope they may prove to be all that is claimed for them.

Considerable interest is manifested here by our farmers in your publication, as shown by the many applications made to me for the loan of it. I shall try and get you a club, as I am satisfied the more the farmer reads the better will be our business. As he becomes better informed as to the mysterious symptoms and characteristics of various diseases, the more respect he has for the man who has made them a study and has acquired the ability to diagnose and prescribe for them; and the less disposition to risk the loss of his stock by attempting to do the doctoring himself.

A man should, in any avocation in life, be measured not by purchased diplomas or certificates, but by the actual ability he possesses, as demonstrated by his work. So let the graduate and non-graduate have a free and fair field with no protection or favor to either; or as we sometimes say out here: let the longest pole knock the persimmons.

Respectfully yours,

V. G. HUNT,

Arcola, Ill.

SOCIETY MEETINGS.

LONG ISLAND VETERINARY SOCIETY.

A regular meeting of the Long Island Veterinary Society was held on the above date. The President, Dr. Geo. H. Berns, in the chair.

The following members were present :

Drs. Berns, R. A. McLean, Pendry, Houseman, Bowers, Bell, Decker Atchison, Jamison, Breslin, Newman, Buckley.

The minutes of the previous meeting were read and approved with one exception.

The Board of Censors and the Committee on Army Legislation reported progress.

Dr. R. A. McLean, the essayist for the evening, read an able and interesting paper, the subject being "Influenza."

All the members present participated in the discussion. The hour growing late, it was decided to postpone the discussion until the next meeting.

On motion, the essayist was unanimously extended a vote of thanks for his paper.

Dr. Geo. F. Bowers was appointed essayist for the March meeting.

Dr. R. A. McLean gave notice of alterations of Sections I. and II. of the Constitution at next meeting. The meeting then adjourned.

D. S. BRESLIN, D.V.S., *Secretary*.

INDIANA ASSOCIATION OF VETERINARY GRADUATES.

The annual meeting of the Indiana Association of Veterinary Graduates was held in the Agricultural Room at the State House, Indianapolis, on the evening of September, 1889. The President, Dr. H. R. Macaulay, in the chair.

The following members responded to roll-call: Drs. Curphey, Rodger, Orlopp, Galbraith, Macaulay, Knowles, Thompson, Navin, Ferling, Ward, Inylne, Buckner, Reid, Digg and Shoemaker.

After the usual preliminary business had been despatched the election of officers for the ensuing year took place. The list is as follows:

President, Dr. M. E. Knowles, of Terre Haute; 1st Vice-President, Dr. J. M. Curphey, of Noblesville; 2d Vice-President, Dr. C. F. Bell, of Kokomo; 3d Vice-President, Dr. W. B. Wallace, of Marion; Secretary, Dr. H. R. Macaulay, of Indianapolis; Treasurer, Dr. J. H. Rodger, of Anderson; Board of Trustees: Drs. Bolser, Ward, Galbraith, Ferling and Upshall.

Following the election came the reports of committees; and then Dr. Knowles addressed the meeting on the causes and treatment of Sterility. This subject was very ably handled, and made very comprehensive by the display of instruments used.

Dr. Curphey then read an interesting and carefully prepared paper on Canine Distemper, which called forth a lively discussion, after which the meeting adjourned for the evening.

The continued session was held on the morning of the 26th, with Dr. Knowles, President, in the chair.

During this part of the meeting there were animated discussions on cases presented by the following members on the following subjects :

Dr. Digg reported a case of Tetanus and one of Paralysis.

Dr. Thompson reported a case of Traumatic Tetanus.

Dr. Shoemaker reported a case of Locomotor Ataxia.

Dr. Macaulay reported a case of Phenitis.

Dr. Inlyne reported a case of Poll Evil.

Dr. Rodger reported a peculiar case of Eczema.

The meeting then adjourned.

H. R. MACAULAY, *Sec'y.*

ILLINOIS STATE VETERINARY MEDICAL ASSOCIATION.

The seventh semi-annual meeting took place at Peoria, on February 20th.

The following papers were to be presented, and we hope will be sent to the REVIEW for publication :

Coal Oil Poisoning in the Horse, by Dr. S. Kingery ; Anæsthetics in Veterinary Practice, by Dr. T. F. Reid ; Sterility in the Mare, by Dr. M. E. Knowles ; Quackery in the Veterinary Profession, by Dr. L. C. Tiffany ; The Action and Uses of Stimulants, by Dr. B. B. Page.

SHOCKING DEATH OF A VIENNA PHYSICIAN.—Quite a gloom has been cast over Vienna medical circles by the death of a young pathologist in the General Hospital here. Two months ago a patient died in the hospital of glanders caught from a horse, and Drs. Rowalski and Hoffmann subjected the body to experimental observations. The bacillus of glanders was readily discovered, reared, and its behavior closely watched. The animals injected with it died of the horrible malady. During these observations Dr. Hoffmann caught cold, and felt acute pains in his side, to allay which he injected morphia. He did this with the syringe he had used during the glanders experiments. Although it had been disinfected, some particle of the poison must have still been in it, for Dr. Hoffmann grew worse every day, and last week he succumbed in horrible agony, his body being covered with ulcers, which when examined, proved to be filled with the glanders poison.—*Medical Press.*

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